



## TRICHLOROETHYLENE

### Consumer Fact Sheet for the Moses Lake Wellfield Contamination Superfund Site

#### What is Trichloroethylene?

Trichloroethylene (TCE) is a man-made chemical that does not occur naturally in the environment. It's a pale blue nonflammable liquid with a sweet smell that evaporates easily. The chemical is used as a metal degreaser. In homes, TCE may be found in paint, spot removers, carpet-cleaning fluids, metal cleaners, and varnishes.

#### How Are People Exposed to TCE?

Most TCE in air comes from metal degreasing activities associated with tool and automobile production. TCE can also enter ground water and surface water from industrial discharges or from improper disposal of industrial wastes at landfills.

Workers in degreasing operations have the highest risk of exposure to TCE. People who live near factories that use TCE may be exposed to low TCE levels in the air.

**Drinking/Eating:** TCE released onto soil readily enters groundwater. Therefore, people who drink water from wells located near TCE disposal sites may be exposed. TCE does not accumulate in plants. Therefore, plants grown on contaminated soil do not accumulate TCE.

**Breathing:** People who use TCE as a solvent (such as paint remover) may breathe significant amounts of the compound. Since TCE evaporates quickly, people who shower or bath in contaminated water may breathe the vapors.

**Skin Contact:** TCE can be absorbed through the skin. Therefore, people who use TCE products without adequate protection, such as solvent-resistant gloves may be exposed. Also, exposure can occur when people work with contaminated soil or bathe in contaminated water.

#### How is TCE Regulated by EPA in Groundwater?

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine safe levels of chemicals in drinking water which do or may cause health problems. This non-enforceable level, based only on possible health risks and exposure, is called a Maximum Contaminant Level Goal (MCLG).

The MCLG for trichloroethylene has been set at **zero** because EPA believes this level of protection would not cause any of the potential health problems described below.

Based on this MCLG, EPA has set an enforceable standard called a Maximum Contaminant Level (MCL). The MCL is set as close to the MCLG as possible, considering the ability of public water systems to detect and remove the contaminant using suitable treatment technologies.

The MCL for TCE has been set at **5 parts per billion (ppb)** because EPA believes, given present technology and resources, this is the lowest level that public water systems can reasonably be required to remove TCE found in drinking water.

The drinking water standards and the regulations that require water suppliers to meet the standards are called National Primary Drinking Water Regulations. All public water suppliers must abide by these regulations.

The federal regulation for TCE became effective in 1989. If TCE is found above 5 ppb in community or public water systems the water supplier must continue to monitor TCE until the problem is corrected or until the State has determined that the contaminant will remain reliably and consistently below the MCL.

If TCE levels are found to be consistently above the MCL, your community or public water supplier must take steps to reduce the amount of TCE so that it is consistently below that level.

#### **What Are The Health Effects of TCE?**

Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

#### **How Will I Know if TCE is in My Drinking Water?**

If the levels of trichloroethylene exceed the MCL, 5 ppb, community and public water systems must notify the public via newspapers, radio, TV and other means. Additional actions, such as providing alternative drinking water supplies (such as bottled water), could be required to prevent serious risks to public health.

#### **How Can TCE Be Removed From My Drinking Water?**

TCE can be removed from drinking water by installing a granular activated carbon filter.

#### **What If I Have a Private Well?**

EPA only regulates public water systems; it does not have the authority to regulate private drinking water wells. If you have your own well, you are responsible for making sure that your water is safe to drink.

In general, private wells should be tested periodically for coliform bacteria. In agricultural areas, private wells should also be tested periodically for nitrate. You should test for other contaminants such as TCE if you suspect a problem.

There is currently an ongoing TCE testing program for domestic wells in the area of contamination concern at Moses Lake.

Please check with EPA, your local health department, and local public water systems that use ground water to learn more about well water quality in your area and what contaminants you are more likely to find.

#### **For more information about the Moses Lake Superfund site or TCE, please contact:**

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#### **For more information about water quality in Moses Lake, please contact:**

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